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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,432	09/22/2003	Hideaki Naruse	Q77419	6506
23373	7590	07/20/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			THOMPSON, CAMIE S	
			ART UNIT	PAPER NUMBER
			1774	

DATE MAILED: 07/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/665,432	<b>Applicant(s)</b> NARUSE ET AL.	
	<b>Examiner</b> Camie S. Thompson	<b>Art Unit</b> 1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 9, 10 and 12 is/are rejected.
- 7) ☒ Claim(s) 5-7, 11, 13-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

*ph*

### **DETAILED ACTION**

1. Applicant's amendment and accompanying remarks filed May 9, 2005 have been acknowledged.
2. Examiner acknowledges amended claim 1.
3. Examiner acknowledges cancelled claim 8.
4. Examiner would like to clarify the objection to the specification. There are other documents in the specification that are not listed on the Information Disclosure Statement.
5. The objection to the specification is withdrawn due to applicant's submission of an amended abstract.
6. The provisional rejection of claims 1-20 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13 of co-pending application 10/606,236 is withdrawn to applicant's argument.

### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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8. Claims 1-4, 9-10 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawasumi et al., U.S. Patent Number 4,810,734.

Kawasumi discloses a composite material that is composed of a polymer and a layered silicate as per instant claim 1 (see column 1, line 67-column 2, line 2). The reference discloses that silicate is modified so as to connect to the polymer (see column 3, lines 20-32). It discloses in the reference that the silicate can be modified with a quaternary salt of a nitrogen compound such as methacryloxoyethyltrimethylammonium chloride (see column 3, lines 20-68). Reference claim 6 discloses that the polymer can be a polycarbonate or a polyether sulfone.

9. Claims 5-7, 11 and 13-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art does not provide for the recited polymer composition, further including an organic modified layered silicate containing a compound selected from a tetraphenylphosphonium compound. Additionally, the prior art does not provide for an organic EL device or substrate comprising a film including the recited polymer composition.

### ***Response to Arguments***

10. Applicant's arguments filed May 98, 2005 have been fully considered but they are not persuasive. Applicant has amended claim 1 to recite a decomposition temperature of 250 °C to 350 °C. Applicant has submitted a declaration wherein organic modified layered silicate B was prepared according to Example 1 in the Kawasumi reference. However, applicant prepared the

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organic modified layered silicate with the use of N-hexadecan-1-yl-4-methylpyridium bromide.

Applicant did not follow the example of the reference by using 12-aminododecanoic acid. The submitted declaration shows a decomposition temperature starting at 190 °C when using N-hexadecan-1-yl-4-methylpyridium bromide. Applicant argues that the examples of the Kawasumi reference have a lower decomposition temperature from the decomposition temperature of instant claim 1. The declaration does not provide clear evidence that the organic modified layered silicate of the Kawasumi reference has a lower decomposition temperature because the experiments carried out in the declaration used 10-aminodecanoic acid and N-hexadecan-1-yl-4-methylpyridium bromide instead of the 12-aminodecanoic acid as listed in the reference. The Kawasumi reference discloses a composite material composed of a polymer and a layered silicate wherein the silicate can be modified with a quaternary salt of a nitrogen compound, as does applicant. The rejection is maintained.


11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (571) 272-1530. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena L Dye, can be reached at (571) 272-3186. The fax phone number for the Group is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**RENA DYE**  
**SUPERVISORY PATENT EXAMINER**  
A.O. 1724 1/19/05